

WHAT IS CLAIMED IS:

1. A method for determining a characteristic of a subsurface earth formation surrounding a borehole, comprising:
 - (a) calculating at least one parameter representative of a property of the formation using log data obtained with a first well tool disposed within the borehole;
 - (b) modeling log data from the at least one calculated parameter; and
 - (c) comparing log data obtained with a second well tool disposed within the borehole against the modeled log data to determine the formation characteristic.
2. The method of claim 1, wherein step (b) comprises modeling log data representative of log data theoretically obtainable with the second well tool disposed within the borehole.
3. The method of claim 1, wherein step (c) comprises calculating a ratio between the log data obtained with the second well tool and the modeled log data.
4. The method of claim 1, wherein step (c) comprises calculating the difference between the log data obtained with the second well tool and the modeled log data.
5. The method of claim 4, wherein step (c) comprises multiplying the calculated difference by a predetermined factor.
6. The method of claim 1, wherein the first well tool is an induction-type tool.
7. The method of claim 1, wherein the second well tool is a laterolog-type tool.
8. The method of claim 1, wherein the determined formation characteristic is a resistivity value or resistivity profile.

- 1 9. The method of claim 1, wherein the method is performed during or after drilling
2 of the borehole.
3
- 4 10. A method for determining a characteristic of a subsurface earth formation
5 surrounding a borehole, comprising:
6 (a) disposing first and second well tools within the borehole to obtain
7 measurement data;
8 (b) producing at least one parameter representative of a property of the
9 formation from the measurement data obtained with the first well tool;
10 (c) producing theoretical data from the at least one produced parameter of step
11 (b); and
12 (d) comparing the theoretical data of step (c) against the measurement data
13 obtained with the second well tool to determine the formation
14 characteristic.
15
- 16 11. The method of claim 10, wherein step (c) comprises producing theoretical data
17 representative of measurement data obtainable with the second well tool disposed
18 within the borehole.
19
- 20 12. The method of claim 10, wherein step (d) comprises calculating a ratio between
21 the measurement data obtained with the second well tool and the produced
22 theoretical data.
23
- 24 13. The method of claim 10, wherein step (d) comprises calculating the difference
25 between the measurement data obtained with the second well tool and the
26 produced theoretical data.
27
- 28 14. The method of claim 13, wherein step (d) comprises multiplying the calculated
29 difference by a predetermined factor.
30

- 1 15. The method of claim 10, wherein the first well tool is an induction-type tool.
- 2
- 3 16. The method of claim 10, wherein the second well tool is a laterolog-type tool.
- 4
- 5 17. The method of claim 10 wherein the determined formation characteristic is a
- 6 resistivity value or resistivity profile.
- 7
- 8 18. The method of claim 10, wherein the method is performed during or after drilling
- 9 of the borehole.
- 10
- 11 19. A well logging system including first and second well tools adapted to be
- 12 moveable through a borehole and an apparatus adapted to be coupled to the well
- 13 tools, the apparatus being adapted to respond to data obtained with the well tools
- 14 to determine a characteristic of a formation, the apparatus comprising:
- 15 means for calculating at least one parameter representative of a property of the
- 16 formation using log data obtained with the first well tool disposed within
- 17 the borehole;
- 18 means for modeling log data from the at least one calculated parameter; and
- 19 means for comparing log data obtained with the second well tool disposed
- 20 within the borehole against the modeled log data to determine the
- 21 formation characteristic.
- 22
- 23 20. The system of claim 19, the modeling means further comprising means for
- 24 modeling log data that is representative of log data theoretically obtainable with
- 25 the second well tool disposed within the borehole.
- 26
- 27 21. The system of claim 19, the comparison means further comprising means for
- 28 calculating a ratio between the log data obtained with the second well tool and the
- 29 modeled log data.

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- 1 22. The system of claim 19, the comparison means further comprising means for
2 calculating the difference between the log data obtained with the second well tool
3 and the modeled log data.
4
- 5 23. The system of claim 19, wherein the first well tool is an induction-type tool.
6
- 7 24. The system of claim 19, wherein the second well tool is a laterolog-type tool.
8
- 9 25. The system of claim 19, wherein the determined formation characteristic is a
10 resistivity value or resistivity profile.
11
- 12 26. A program storage device readable by a processor and encoding a program of
13 instructions including instructions for performing the apparatus operations recited
14 in claim 19.